A PUBLICATION OF THE NORTH AMERICAN MYCOLOGICAL ASSOCIATION

The Mycophile Quarterly

JULY AUGUST SEPTEMBER 2023

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JOURNEY TO THE CENTER OF THE FUNGI FOREST, BY SUNDARI MASTERS

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Visit www.namyco.org or email Luke Smithson
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Content
Please contact Mycophile@namyco.org with your article proposals and ideas. We'll get you published!

Submissions
Submissions must be received in editable-document format (do not send pdfs), with photos attached separately (not embedded) and photo credits provided.

NAMA Toadstool Picker's Review

Planning and Executing Annual and Regional Forays

Planning and executing Annual and Regional Forays is among the most important and time-consuming activities NAMA accomplishes. NAMA's Foray Committee is where most of the planning work happens. Below, I have compiled a list of frequently asked foray-planning questions and answers.

Q: How do you choose a foray location?

A: For our Regional and Annual Forays, we have three major considerations for choosing locations:

1. Has NAMA held a foray nearby recently? We endeavor to move our events around to regions that we haven't been to recently. Some priorities for the future include Canada, Northern Rockies, Gulf Coast, Deep South and Northeast.
2. Mushrooms are the focal point. We need locations that promise excellent mushroom hunting within a 60-minute drive, max. We want to be in that location during the prime of the season.
3. A venue that is affordable and appropriate. This might range from a comfy resort atmosphere to a more spartan camp environment, depending on the year.

Q: What if my local mushroom club wants to team up with NAMA to host a foray?

A: Having the local club, or several of them, involved in the foray is critical to success. NAMA wants to partner with at least one club for every foray! The club is typically in charge of scouting all the foray locations and usually provides a team of volunteers (who receive waivers) to help with many of the activities. In return, NAMA offers the club a share in any "profits" left over after costs are reconciled and also may offer day passes to local folks when possible.

Q: How do you calculate the price of the foray?

When we create our foray budget, we estimate all of the expenses and set a 10% margin, as our Executive Board has prudently requested. Lodging and food are always the biggest pieces. Here is the cost breakdown for the Appalachia NAMA 2023 median ticket price of $550:

Q: How do you select featured presenters?

A: We ask each of our committees to submit a list of up to three potential featured presenters and then the NAMA Foray Committee selects from that list. We like to include regional experts, but are also not adverse to bringing in presenters from around the world. We work hard to have our speakers chosen through a fair and open process. We also work hard toward diversity and achieve representation of a wide variety of mycological interests. Speakers are currently offered paid a $500 honorarium as well as all onsite event costs.

Q: How were the Annual Foray Scholarship recipients chosen?

A: The NAMA Executive Committee voted to offer each of the other committees, as well as our affiliated clubs, the opportunity to award one scholarship. We required two things: 1) recipients had never previously attended a NAMA foray; and 2) the process for choosing was fair and public. Some committees held contests. We also received approximately 25 applications from our affiliated clubs for the 15 available scholarships and then simply drew names from a hat.

Q: How are the Annual Foray Scholarships funded?

NAMA has a special Scholarship Fund we have been building for years. We use that fund to pay for the Annual Foray Scholarship recipients' attendance; their foray costs are not paid by other attendees. Our Scholarship Fund grows annually from donations and our silent auction.

Q: Can I help?

A: Yes! Join our NAMA Foray Committee, which meets 1-2 times monthly to plan the upcoming forays. Help us find a great venue in your region to host us in 2025 or 2026. As we mentioned above, Canada, Northern Rockies, Gulf Coast, Deep South and North East are priorities for the future.

Q: How can I volunteer?

A: At Appalachia NAMA 2023, we had a crew of 21 people with full volunteer waivers who devoted 75% to 100% of their time at the event to helping. We also had help from 29 volunteers who received a $150 discount and helped with a myriad of tasks, especially driving our foray vans. Jess Starwood served admirably as our Volunteer Coordinator. We will create and publicize volunteer opportunities in advance of our next foray, however, please note that we will prioritize filling volunteer slots with members of our local partner clubs as part of that relationship.

Trent Blizzard

Trent Blizzard
President

NAMA News

Learn about the Different Things Happening in and Around NAMA.

NAMAWear

KATHY YERICH, NAMA MARKETING COMMITTEE CHAIR

Each year, we all look forward to seeing the new foray shirt, but this year for the first time, NAMA had its own merchandise table.

Multitalented artist, designer and teacher of the Appalachia NAMA 2023 Mushroom Basketweaving Workshop Karen Milnes, a member of the West Virginia Club as well as the Blue Ridge Mycological Society, created a striking drawing of mushrooms in shape of the stylized *Amanita* on the NAMA logo. Maybe you saw photos of folks proudly wearing their new NAMAwear? Seems you can never have too many mushroom shirts!

Special thanks to Jess Starwood (Appalachia NAMA 2023 Volunteer Coordinator) and Alana Davis (Pictured), who lovingly set up our mini-store and kept smiling through the very warm and very busy weekend!

If you couldn't attend the Annual Foray or didn't find your preferred size or color, please check out NAMA's Shopify Store.

Instagratitude! May through September 2023

It's always great when we can meet each other in the woods, classroom, kitchen, a restaurant, or even AT the Annual NAMA foray! In the meantime, we have photos and stories on Instagram to not only keep us connected, but to widen our circle and find other friends in the mycological community!

At the foray in North Carolina, I had the pleasure of meeting Adam Cohen in person for the first time. He is NAMA's Instagram wrangler. Huge thanks to him and to ALL the Instagram artists who so generously share their knowledge with us on the NAMA Instagram page; because of them we have a constant source of high-quality fungal matter to consume and our community has grown to 23,000 followers.

Here is a list of the Instagram Takeover Artists, from mid-May to mid-September this year. Please follow @northamericanmyco to find out what all of the buzz is about!

INSTAGRAM TAKEOVER ARTISTS

Charlie Aller	**@charliceps**
Eric Joseph Lewis	**@ericjosephlewis**
Sam Bucciarelli	**@sam.buca.0914**
Carly Rae Anderson	**@mycoblonde**
Teresa Mycelia	**@teresa.mycelia**
FogHornFungi	**@foghornfungi**
Kevin Krzyzaniak	**@blueridgechagaconnection**
Luke Gilbert & Natalie Dechiara	**@wildwildgood**
David Augustyniak	**@theartfarm_unincorporated**
Michael Beeckman	**@just.some.mushrooms**
Zachary Hunter	**@the_fungivore**
Zoe Yang	**@jingtastic**
Jules Amanita	**@julesamanita**
Gabriela D'Elia	**@gabrielamushroom**
Adam McCrae	**@mushroom.marauder**
Zach Papaleoni	**@sporetofork**

2023 NAMA Awards

JOHN LAMPRECHT, AWARDS COMMITTEE CHAIR; KATHY YERICH, MARKETING COMMITTEE CHAIR; TRENT BLIZZARD, PRESIDENT

In the absence of NAMA Awards Committee Chair John Lamprecht, the following awards were presented to distinguished honorees by Kathy Yerich, NAMA Marketing Committee Chair during the Saturday-evening program at Appalachia NAMA 2023. Below, we share some sparkling excerpts from nomination letters.

The Harry and Elsie Knighton Service Award was established by the NAMA Board of Trustees to recognize and encourage persons who have distinguished themselves in service to their local clubs. It is named in honor the Knightons, whose prodigious efforts brought forth the North American Mycological Association in 1961. This annual award consists of a plaque, publicity for the winner and club in *The Mycophile*, a one-year membership in the organization and registration, housing and foray fees for the next NAMA Annual Foray.

2023 Recipient: Philip Carpenter, PhD, Fungus Federation of Santa Cruz

"Dr. Philip Carpenter has made extraordinary contributions to the Fungus Federation of Santa Cruz and the greater community prior to our official founding in 1984 to the present. A respected leader, Phil has worn many hats in our organization,

often simultaneously! A gifted teacher, he generously shares his time, knowledge, and enthusiasm with all, from the very basic "Can I eat it?" queries to detailed points of identification. A multiple-term Prime Minister (president), Phil has led with intelligence, wit and heart. He has for many years arranged programs and speakers for our monthly meetings. As NAMA representative, Phil has made connections enabling us to book a diverse group of speakers for our membership meetings and the annual Fungus Fair."

– The Fungus Federation of Santa Cruz (FFSC), excerpted

"It is nearly impossible to overstate the importance of the role Phil Carpenter has played in my journey in the world of mushroomers and mycology. Phil has always been exceptionally generous with his time, his knowledge, his willingness to teach anyone and everyone, especially complete beginners—and always with a friendly, approachable attitude. Phil's advocacy was instrumental in revitalizing the UCSC fungal collections, and in undertaking one of the first major community-science-led DNA-sequencing projects in the country. The impact of Phil's decades of involvement with the FFSC and California mycological communities has been profound. I will forever be indebted to him for his mentorship and friendship."

– Christian Schwarz, coauthor of *Mushrooms of the Redwood Coast*, excerpted

"Hey Phil... thanks for letting me tag along today up to the Big Creek Lumber property, it was great fun to explore an area I've never been and may never be again. I thought you were amazing with those students... patient, gentle, thoughtful with their endless questions (I thought I would have worn you out with my own annoying questions during the last year). The FFSC is extraordinarily lucky to have you as our Prime Minister.

– John Leekley, FFSC member, excerpted

"Years ago my friend David and I hiked often in the Santa Cruz mountains, and occasionally we would find various kinds of mushrooms growing in the forest. One day I don't know what got into us, but ... instead of kicking and stomping on them we found ourselves asking each other "...hey, if you ate this stuff will it kill you?" "Well," said David, "I know just the guy." That day we scavenged a full bag of mushrooms and came to visit the mushroom fairy who lived in the woods and that turned out to be Phil Carpenter. His eyes lit up when he saw our mushroom and began immediately calling out the names of all the different species. Well, none of that made any sense to us at the time, but I can never forget how he made me feel. Collecting this stuff is really fun and it can make you sound smart, too! Just like that, we were hooked. Phil Carpenter connects to people in a way to bring out their curiosity and imagination. He is a true science educator and a community leader."

– Peter Mu, FFSC Minister of Programs, excerpted

The Gary Lincoff Award for Contributions to Amateur Mycology
is given annually to recognize a person who has contributed extraordinarily to the advancement of amateur mycology. Recipients have often extensively conducted workshops, led forays, written or lectured widely about mushrooms and identifying mushrooms, all on a national or international level. The awardee receives a plaque and lifetime membership in NAMA.

2023 Recipient: Andrew Methven, PhD

"It is a pleasure to write this long overdue nomination letter in support of Dr. Andrew Methven receiving the Gary Lincoff Award for Contributions to Amateur Mycology. This award epitomizes Dr. Methven's contributions to amateur mycology, which are ridiculously numerous (see attached CV). He has been an active member in the Illinois Mycological Association, Missouri

Mycological Society and the Asheville Mushroom Club, where he has presented lectures on all types of macrofungi. His knowledge of the funga of North America is incredible—in fact, I am sure he has forgotten more mushrooms than I ever learned! He has provided exceptional workshops for amateur mycologists at the Highlands Biological Station, Sleeping Bear Dunes and the Smoky Mountain Field School. Anyone participating in one of his workshops understands his vast knowledge on all types of mushrooms and the patience he shows with beginners. Dr. Methven has developed a long and noble career providing advice and knowledge to amateur mycologists throughout North America."

– Andrew N. Miller, PhD, Principle Scientist, Mycologist, Illinois Natural History Survey, University of Illinois, excerpted

President's Outstanding Service Award

Former NAMA President Don Huffman instituted the **President's Outstanding Service Award** during his term to honor persons who have been of outstanding service to NAMA. Current NAMA President Trent Blizzard honored the following recipients in 2023.

2023 Recipient Derek Zeller, Nebraska Mycological Society

"In the last year, former Web Admin and Website Committee Chair Derek Zeller devoted many hours of time and expertise toward moving NAMA into new association-management software. This new software is critical towards helping

us achieve our mission across the entire organization. Organizationally, we lacked the experience and skill to manage this transition and Derek handled the entire process for us. We are deeply grateful."

– NAMA President Trent Blizzard

2023 Recipient Andrew Wilson, PhD, NAMA Voucher Collection Project Committee Chair

"Identifying and vouchering specimens at NAMA forays is a key part of our mission. Dr. Wilson is the Voucher Collection Project Committee Chair and has managed the mushroom ID and vouchering team at NAMA forays for the past three years. He also works to develop the next generation of mycologists by recruiting a fresh team of assistants (typically graduate students) who set up the ID tables and process thousands of freshly foraged fungal specimens, ultimately documenting and physically preserving hundreds each year. These specimens, which comprise an invaluable snapshot of fungal biodiversity, are accessioned into the permanent collection at Chicago Field Museum of Natural History fungarium. I am grateful for the vast amount of time he volunteers to make this process run smoothly and also for his accessible and patient demeanor."

– NAMA President Trent Blizzard

NAMA Executive Committee Leadership Opportunity

DAVE LAYTON, FIRST VICE PRESIDENT AND NOMINATING COMMITTEE CHAIR

Help Lead the NAMA Executive Board!

The Executive Board position of Second Vice President becomes open January 1, 2024, as Laura Juszczak's term is expiring; Laura has served faithfully and with zeal, ably stepping into the duties of the First Vice President during the search that led to Dave Layton's current occupation of that office.

The office of NAMA Second Vice President offers a great opportunity for a committed individual to help shape NAMA's exciting future! It is perfect for someone to build on their leadership skills while serving on the Executive Committee of a continent-wide organization with about 2,000 members (and growing), to help direct programming initiatives and funding.

Per the NAMA Policy Manual, the official duties of Second Vice President are as follows:

a) Shall promote the growth and development of NAMA.

b) Shall substitute for the President in the absence or incapacity of both the President and the First Vice President and, if the First Vice President is up for reelection, shall chair the Nominating Committee. This is a voting position.

Outgoing NAMA Second Vice President Laura Juszczak at Appalachia NAMA 2023 holding *Asterophera lycoperdoides*.

Expectations include attendance of the NAMA Annual Meeting held during the Annual Foray, preferably in person but by Zoom if need be; participation in monthly Zoom meetings of the Executive Committee as often as possible; working with committees and on initiatives as necessary; and assisting with NAMA forays and events. Perks include registration and lodging for the Annual Foray; being one of the first to know about NAMA forays, events and presentations; meeting and working with committed, like-minded mycofolks to shape the future of North American amateur mycology!

To express interest in this position or to learn more, please email Dave Layton, NAMA First Vice President and Nominating Committee Chair at vp1@namyco.org.

NAMA Club Relations Committee Kicks Off

LUKE SMITHSON

The newly minted NAMA Club Relations Committee invites all interested NAMA members to join our committee and help fulfill our mission of delivering the value and benefits of NAMA to the many mushroom clubs of North America. We believe that NAMA members hold a huge amount of experience and are working on ways of spreading that wealth.

Committee mission:

The NAMA Club Relations Committee is devoted to communicating the value of NAMA membership to affiliated and non-affiliated clubs' leadership.

Look for an upcoming survey to your local clubs leadership seeking ways that we can help your club become a stronger mycological force!

Our goals are to:

- Promote the growth of NAMA and help NAMA be responsive to the needs of its affiliated clubs.
- Assist NAMA-affiliated clubs in becoming stronger and better serving their own membership.
- Promote the sharing of ideas and resources among affiliated clubs and the NAMA community.
- Build relationships with non-affiliated clubs and seek to welcome them into the NAMA community.

We meet on the first Tuesday of each month at 7:00 PM Eastern. If you are interested, please contact NAMA Membership Manager Luke Smithson at membershipmanager@namyco.org.

The Conservation and Stewardship Committee

AARON TUPAC, CHAIR

The Conservation and Stewardship Committee has developed the following mission statement and definition of terms.

Conservation and Stewardship Mission Statement

Our mission is to develop a culture of well-informed, responsible and ethical stewardship for Kingdom Fungi. We are responsible for developing and sharing ecocentric educational materials grounded in conservation and sustainability best practices. We support and encourage civic action, engagement in scientific inquiry, acts of reciprocity and any other activities, decisions, behaviors and technologies that lead to the protection and or increased understanding of fungi, fungal habitats and ecology.

We hope our mission intrigues you to consider bringing your energy and ideas to this newly formed committee.

Definition of Terms

- **Environmental Stewardship:** the responsible use and protection of the natural environment through conservation and sustainable practices.
- **Ecocentrism:** valuing nature for its own sake.
- **Anthropocentrism:** valuing nature for the material or physical benefits provided to humans alone.
- **Conservation:** taking steps to prevent further loss of biodiversity.
- **Sustainability:** characterizes the ability of biological systems to remain diverse and productive over time.
- **Best Practices:** From the Stewardship Best Practices Planning Guide, published in 2008: "a program or practice with specific outcomes that has been clearly defined, refined, and evaluated through repeated delivery and supported by a substantial body of research. These practices represent the best knowledge available for use under specified circumstances. It's important to note that best practices may change over time. They are recommendations based on what has been observed or documented to be effective to date, but which may change given additional experience, evaluation, and research."
- **Reciprocity:** balanced and mutual exchanges between organisms and between organisms and the environment.
- **Ecology:** the study of the relationships among living organisms, including humans, and their physical environment.

DNA Sequencing Committee (DNAMA)

JOSHUA BIRKEBAK, CHAIR

We are excited to be an official committee and have the opportunity to serve NAMA as well as its affiliated clubs and members regarding all things DNA Sequencing. In brief, we are working on compiling and providing education and protocols on the following:

- Protocols and Standardization
- Data Hygiene and Traceability
- Data Interpretation
- Software and Hardware
- Specimen Archival

In addition, we are here to help connect members and clubs with resources for DNA sequencing, either on their own or through one of our partner organizations. Look forward to hearing about some of our own research projects that we would like your help with shortly!

We are working on a more thorough introduction, including the work we have already accomplished on surveying current interest and compiling protocols on NAMA website page, but didn't want to miss the chance to introduce ourselves and invite anyone interested to join in on our committee meetings. Meetings are held at 7:00 PM Central Time, on the second Thursday of every month. Please reach out to the Committee Chair, Joshua Birkebak at dna@namyco.org, if you are interested in joining or have any questions regarding DNA sequencing.

NAMA Fiscal Year 2023 Annual Report Draft

BRUCH REED, NAMA CHIEF OPERATING OFFICER

NAMA's Policy Manual requires the compilation of an Annual Report for review by attendees of our Annual Meeting, which this year took place on Friday, August 25, 2023, at Kanuga Conference Center in Hendersonville, North Carolina, during Appalachia NAMA 2023. The draft of this Annual Report, which covers the dates July 1 through June 30, 2023, may be viewed by clicking here.

NAMA
Forays

Embark on
an Immersive
Experience.

Voucher Collection Project Report for MO-NAMA 2022 Annual Foray

Trout Lodge, Potosi, Missouri, September 29 - October 2, 2022

OLIVIA FILIALUNA, DR. PATRICK R. LEACOCK, WYATT GASWICK

MO-NAMA 22, the 2022 Annual Foray, was held September 29 to October 2 in Potosi, Missouri. The event was organized by the NAMA Foray Committee and the Missouri Mycological Society. Jay Justice and Andrew Methven (Eastern Illinois University) served as chief mycologists. Collecting areas included the Trout Lodge grounds, five state parks and other sites.

Many thanks go to the Voucher Collection Project (VCP) crew of Dr. Andrew Wilson, Chair; Adele Mehta, Foray Recorder; Dr. Patrick R. Leacock, Voucher Recorder; Wyatt Gaswick, Collections Assistant; and the

NAMA-sponsored Voucher Student Assistants Clarissa Arana (Colorado Mycological Society), Gabriela D'Elia (Fungal Diversity Survey), Jacob Kalichman (University of Tennessee), Gary Olds (Colorado Mycological Society), Annie Shauster (Colorado Mycological Society), and Mariah Rogers (Wisconsin Mycological Society).

We thank the NAMA Board of Trustees for their continued support of the VCP program. The NAMA voucher specimens have been accessioned into the permanent herbarium collection at the Field Museum of Natural History (F), Chicago, Illinois.

This species list including 230 taxa (genus, species and varieties), comprising 50 ascomycetes, 174 basidiomycetes, 5 myxomycetes and 1 unidentified fungus. The most diverse genera were *Russula* (7 spp.), *Amanita* (6 spp.), *Cantharellus* (5 spp.), and *Tricholoma* (5 spp.).

Twenty-five persons made identifications, including John R. Plischke III, Jacob Kalichman, Wyatt C. Gaswick, Dr. Patrick R. Leacock, N. Jay Justice, and 20 others.

There are 230 voucher collections preserved from the foray. NAMA vouchers with images will be available online on MyCoPortal.

More Information about the Voucher Collection project can be found on the NAMA website: https://namyco.org/voucher_collection_project.php.

Vámonos!: NAMA_MX23: Regional Foray in Mexico

BRUCH REED, NAMA CHIEF OPERATING OFFICER

Charlie Havens receives Matlazinca ceremonial bread and smoke blessing, San Francisco Oxotiplan

Aaron Berg plans to open his presentation on NAMA_MX23: Regional Foray in Mexico to his friends in Minnesota Mycological Society with a slide containing the email address for our event organizers, Zachary and Kim Hunter, with the words "Just GO."

I could not agree with him more; to encompass in mere words the experience shared by NAMA_MX23 journeyers is simply not possible. Every moment was rich with wonders, both mycological and human, a thrilling honor and a privilege. As Aaron says, GO. Just go.

If you are very lucky, you will go with the our event organizing team of the Zachary and Kimberly Hunter of The Fungivore; their passion, their professionalism, their deep connections in various Mexican communities, including the culinary and mycological, curate a rolling celebration that embodies the best kind of travel—besides which, they themselves are a blast to be around! We are very hopeful to work with them again.

Our group of 40 mycosouls was treated to the best of everything offered culinarily and mycologically in unforgettable Mexico City restaurant haute cuisine, balanced equally by the fantastic flavors conjured by Indigenous chefs in their

Huitlacoche appetizer, Monstruo de Agua.

NAMA_MX23 attendees assist chefs preparing freshly foraged *Amanita basii*

welcoming communities of San Antonio de la Laguna and San Francisco Oxotilpan. The Hunters brilliantly situated us at comfortable Hotel Salamanca in the vibrant neighborhood of Colonia Roma for the Mexico City portion of our journey, from which we mostly strolled to such cutting-edge culinary experiences as provided by Cofounder and CEO Men C. Matias Vera-Cruz Dutrenit of Cerveceria Monstruo de Agua and Colectivo Axolote, where he creates magical mushroom-based brews and extraordinary dishes including a porcini consomme that made me hunger for a whole lifetime savoring that broth.

Dra. Laura Guzman mycologizing with NAMA_ MX23 attendees.

Yet every dish was that mouth-delighting and memorable; I feel hopelessly challenged to summarize the gastronomic achievements briefly when I could pen a tome on every forkful, from Rafael Rivera Romano's Forte hongoliciouness to our wistfully delicious farewell dinner by Chef Rodrigo Morales Alavez at Tencui, accompanied by onsite-fermented lion's-mane mezcal, to the revelation of roadside favorite Fonda Yecapixtla, which specializes in dried spiced-beef cecina sandwiches, accompanied by toasty macha sauce. Lively Chef Daniel Frydman teamed with cool-cat Chef Joaquin Cardoso to create Loup Bar's delectability. We only viewed mouthwetting photos of Chef Laura Cardenas Armas' trendy La Pitahaya Vegana cerise-pink-shelled oyster carnitas tacos but they offer ample reason to head back to thrummingly vibrant Mexico City.

Meals at gorgeous Rodavento Valle de Bravo resort were inspired and excellent as well, always accompanied by fresh *aqua fresca* in new flavors every day. I

Heather Brooks' living mushroom art arrangement.

Psilocybe aztecorum with Voucher Slip

cannot adequately extol the beauty of this cloud-forest dream of a resort, which reverently preserves the natural landscape while providing luxurious individual-hacienda accommodations, excellent, enthusiastic service AND abounds in mushrooms popping from every conceivable corner. On our last evening at Rodavento, we were allowed to assist our chef partners to prepare, cook and then feast upon mushrooms foraged that day right on on the resort grounds, including huge *Macrolepiota procera*, gorgeous *Amanita basii* and such surprises as *Gymnopus dryophilus*. Have I mentioned that you must simply GO?

Aaron Berg of Minnesota Mycological Society mycologizing.

Following incredible guided forays in the lushly forested mountains north of Mexico City, we were treated to meals prepared and served by Indigenous Matlazinca-speaking chefs in San Francisco Oxotilpan as well members of the Mazahua Community of San Antonio de la Laguna, including tamales, a selection of the 300 species of native herbs and greens, mole, fermented beverages and, of course, "hongos" (fungi) collected by the hongeras and hongeros (titles of honor in these communities, referring to their deep mycological knowledge and experience). The complex revelation of flavors found here deserves its own exploration but it all comes back to the certainty that you must GO. In San Antonio, our beautiful foray ended in a deluge that necessitated rushing out to avoid potential flooding; I can still taste my last hurried bite of fresh verde sauce, against which will forever measure future mouthfuls.

Ancient eucalyptus tree and its church, San Francisco Oxotiplan.

Guepinia helvelloides

NAMA_MX23 attendee group photo.

Everywhere we went we were served mushroom species new to most of us: *Ramaria* featured prominently along with *Lyophyllum* ("clavitos"), *Helvella*—yes, *Helvella*, harvested and dried by the bushel. Folks here share a mystical reverence for the startlingly bright-blue *Lactarius indigo* embodied in its creative culinary treatment. *Russula brevipes* (soon apparently to be *Lactarius*) is one of the most commonly consumed species; yes, you are reading right; *R. brevipes* is one of the favored mushrooms among local mycophagists. It should be noted, of course, that reading this account should NOT constitute a recommendation that YOU consume these mushrooms yourself, in your own homeland; Universidad Nacional Autónoma de México (UNAM) Mycology Professor Chair Dr. Roberto Garibay-Orijel made sure to note for us that just because these mushrooms are harvested, prepared and served safely among certain communities in Mexico does not necessarily mean they are safe from other locations. Again, Aaron is right: you, yourself, simply must GO.

I haven't yet touched on the serious mycological mission of our trip, the rich tapestry of scientific presentations rounded up by NAMA_MX23 event organizers Zachary and Kimberly; once again, coverage herein will perforce

A delicious Mazhaua meal.

fall short of the extent to which distinguished Mexican scientists rolled out the mycological red carpet for our hungry minds. Much of the presenting was kindly conducted in English but UNAM Mycology PhD candidate Ireri Montrer deserves very special gratitude for her effervescent translation skills, where necessary, of presentations and panels by leading-light Mexican mycologists Dra. Cristina Burrola-Aguilar, Dr. Victor Soto, Dra. Laura Guzman Davalos, Dr. Roberto Garibay-Orijel, Dra. Milay Cabarroi, Dra. Mara X. Haro-Luna, PhD candidate Jose Manuel Guerrero Campa, Lic. Maria de Jesus Cedillo, Lic. Griselda Bautista Hernandez, Vincente Ramirez Cima, Belen Itahi Bautista Eliseete Ramirez Carbajal. Each of their offerings was dazzling and incisive.

Myriad other highlights included visits to the stunning UNAM Biodiversity Pavilion and Botanic Gardens, humbling sacred smoke ceremonies before we entered the hongeras' forests to collect (in San Francisco Oxotilpan, each of us was given a necklace of sacred bread to wear; I was informed that the shape represents a jaguar but I surely saw something else; look closely at the first photo accompanying this piece) and a final night dancing at Mexico's coolest club, Monstruo de Agua Bar, a speakeasy accessed via secret entrance through an operational laundromat.

Large, likely undescribed *Cordyceps* from Rodavento resort grounds.

For 25 years, the opportunity for NAMA members to collect and voucher specimens through our Voucher Collection Project has been seminal to the our amateur mycology mission; I am proud to have worked with Dr. Garibay-Orijel and the other Mexican mycological luminaries, as well as all our attendees, to create vouchered specimens of 200 fungal species. Notable among these are the rare red jelly *Guepinia helvelloides* and three species of *Psilocybe*, including *P. zapotecorum* (I will forever cherish the sparkling smile of Dra. Guzman-Davalos as she handed me the specimen), as well as P. *aztecorum* in a colony I am told is vastly disjunct from its known range. A large white *Cordyceps* found at Rodavento so far seems undescribed. Negotiations for these specimens' residence are ongoing but the plan is for them to remain the property of MEXU UNAM Herbarium in Mexico City, eventually being sent on formal loan to Chicago's Field Museum of Natural History to be housed among NAMA members' steadily growing collection of 4,000 specimens. I must take this opportunity to thank Lorinda Sues, Carlyn Pudwill and Kavin Manickaraj especially for their indefatigable attentiveness to the NAMA_MX23 Voucher effort.

"I did not tell half of what I saw."

I conclude this account reluctantly reminded of Marco Polo's reputed last words: "I did not tell half of what I saw." Not a tenth, nor even a trice. With the fall-foray whirl wound down, I hope to put together my own presentation to honor the experience more fully, as might properly befit the splendor of NAMA_MX23 and to inspire you to realize your own Meximycological dream.

Sweet Story from Appalachia NAMA 2023 Wildly Successful Silent Auction

KATHY YERICH, NAMA MARKETING COMMITTEE CHAIR

THE Elsie Knighton

Heartfelt and humbling thanks to everyone who donated and purchased from the annual Silent Auction at the Appalachia NAMA 2023! It is exciting to announce that year's Silent Auction garnered almost $6,000 for the NAMA Scholarship Fund!

It also generated immeasurable connections through discussions over books, objets d'art and tee-shirts from past forays. I bumped into Minnesota Mycological Society member Ali Linderer at breakfast, proudly wearing the *Boletus barrowsii* teeshirt she had won at the auction the night before. She beamed about how she had met Carlene Cliver that morning, who noticed the shirt and mentioned that she had donated it to the auction. Carlene shared that she herself had won it from a NAMA foray Silent Auction years ago, when it was originally donated by the late great Elsie Knighton!

Carlene Cliver and Ali Linderer

Appalachia NAMA 2023 Scholarship Recipients Share Experience

COMPILED BY RACHEL BALLOU

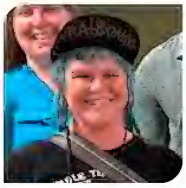
Front Row (L-R) Tiffany Theden, David Yennerell, Bucky Raeder, Kris Kluting, Rachel Ballou. Back Rows (L-R) Krista Willmorth Ethan Zapach, Michelle Kisliuk, Morgan Hass, Jules Amanita, Sarah Shaver, Ari Puentes, Megan Deaton

This year, NAMA awarded an unprecedented number of scholarships to attend our Annual Foray. Below, they share their Appalachia NAMA 2023 experiences.

Tiffany Theden

NAMA Visual Arts Committee Scholarship

Member of: Yakima Valley Mushroom Society, Northwest Lichenologists, Fungal Diversity Survey (FunDis)



Bio: I work for the Chelan Douglas Land Trust in North Central Washington State as the Stewardship Assistant. I love doing natural history illustrations in my free time and exploring as many new trails and places as I can, always looking for mushrooms and lichens! I am planning on going to grad school, just need to decide where, and whether I want to focus on fungi, lichens or alpine flora; It's so hard to choose just one! I help with design work for FunDiS, having worked on designing the pamphlets for the West Coast Rare Fungi Challenge, the maps for the Northeast

Rare Fungi Challenge, and am currently working on designing the booklet for the new Southeast Rare Fungi Challenge.

Tiffany Theden's NAMA Visual Arts Committee Annual Foray Logo Contest winning entry glows under UV light.

Favorite part of the foray: The field trips! I went to Panthertown Valley and we made it down to Schoolhouse Falls. Found a couple purple-gilled waxy caps (*Hygrocybe purpureofolia*), my favorite find of the weekend and such a handsome little friend! I was glad to see how many people were interested in the UV night hikes. The number of lichens that are fluorescent in 365nm UV light is amazing, especially many of the crustose rock lichens. I loved a particular *Cladonia* species. I found that it lit up purple-blue in the UV light, since many of the other *Cladonia* had no reaction.

David Yennerell (Llucky)

NAMA-Affiliated Club Scholarship

Affiliation: Missouri Mycological Society's Kansas City Chapter

Bio: My connection with nature is one of my first memories, walking the path along my grandfather's garden. By day, I'm a skilled video editor, crafting visual stories and sharing them with my friends, but when the screen fades to black you'll find me embarking on thrilling hikes that serve as my escape into nature's embrace. My journey has led me to become an enthusiastic chronicler of our fungal friends. Armed with my camera and microphone, I capture the wonders of nature and curate a tapestry of moments that celebrate the beauty found amongst our forests. My experiments with lion's mane (*Hericium erinaceus*) has led me down a path of great appreciation towards its versatile uses and I am ever closer to an almost perfected lion's mane infused cold brew coffee recipe.

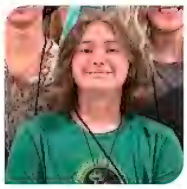
My favorite part of the foray was consuming knowledge from people who have not only written books on the subject but who have lived the excitement

of scouring the forest floor for hidden treasures, people who have dropped the stigma in exchange for pure adventure. We are modern-day treasure hunters and the people in this community are special in more ways than one.

Bucky Raeder

NAMA-Affiliated Club Scholarship

Affiliation: Alabama Mushroom Society



Bio: My interest in mushrooms started with morel hunting when I was young in Tennessee. Seeing the incredible diversity of fungi while I was out in the woods encouraged me to learn more beyond only edible fungi. Now I'm interested in pretty much everything to do with mycology.

Favorite part of NAMA/forays: I really loved getting to see all the different specimens people brought in at the ID tables, and how the professionals go about sorting and identifying them. I also got to go on several forays and see the fungi in their natural habitats (especially the ones that don't grow where I live in Alabama). Overall, I had a great time and it was a tremendous experience that I will value forever, and I'm sure will greatly benefit me as I continue venturing into mycology.

Kris Kluting

NAMA-Affiliated Club Scholarship

Affiliation: Michigan Mushroom Hunters Club

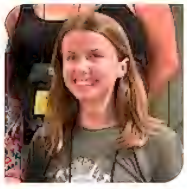
Bio: I am a Park Ranger and have been mystified and obsessed with mushrooms for many years! I enjoy sharing my appreciation for the natural world with other people. I also worked at a mushroom farm that grew gourmet mushrooms and supplied them to local restaurants. My favorite mushroom to eat and hunt is chicken of the woods (*Laetiporus* species).

Favorite part of the foray: My favorite part of the foray was meeting like-minded mycophiles from all over the country! I learned about UV lights and mushrooms and was very surprised by the way UV looks at night when shined off of different mushrooms!

Rachel Ballou

NAMA Marketing Committee Scholarship

Affiliation: South Sound Mushroom Club (current secretary)



Bio: While I work in the medical field and not in the woods, I've had the unique opportunity to encourage families to become community scientists! By promoting apps such as iNaturalist and Seek, I hope to encourage families to learn about different species in their parks and ultimately improve the physical and mental health of my community. I have been very excited to learn from some of my club members on how to submit samples for DNA sequencing and I was thrilled to be able to attend the DNA-barcoding workshop to gather more knowledge to share with my club. In addition, I thoroughly enjoyed learning more about the other scholarship winners and their backgrounds! I can't wait for the NAMA foray to be in our "neck of the woods" next year!

Krista Willmorth

NAMA-Affiliated Club Scholarship

Affiliation: Southern Idaho Mushroom Club, former president from 2020-2022

Bio: I am the creator of the The FunGal Forager Blog. My goal is to make foraging more accessible and approachable, so everyone can enjoy the many benefits and security of knowing how to forage their own food and home remedies.

Favorite part of the foray: My favorite parts, hands-down, were my fellow attendees. There were intelligent, diverse, hilarious and creative folks everywhere I turned. People I'd known online for years became mushroom-hunting foray pals in real life. There was an instant mycological kinship with others I met for the very first time. I'm excited to share what I learned with my local club and to encourage my blog readers to get involved with a club (or two!) in their own area. I can't wait to share "my" side of the country with my new friends at HalloweeNAMA 2024!

Ethan Zapach

NAMA-Affiliated Club Scholarship

Affiliation: Alberta Mycological Society, Athabasca Watershed Council

Bio: I am a fourth-year student pursuing a bachelor's degree in business, majoring in Marketing. I volunteer with the Athabasca Watershed Council to assist in the restoration of the Tawatinaw River and help build their database of local biodiversity in the Boreal Natural Region. With my videography expertise and graphic design background, I thoroughly documented my experience at the foray and will be presenting it to AMS when I return.

Favorite part of the foray: My favourite part of the foray was learning directly from fungi folks who are just as nerdy about mushrooms as I am, but far more knowledgeable. This opportunity was invaluable to my growth as an amateur mycologist.

Michelle Kisliuk

NAMA-Affiliated Club Scholarship

Affiliation: Blue Ridge Mycological Society

Bio: I am an Associate Professor of Music at the University of Virginia, where I teach about the poetics of ethnographic writing and about the music and lifeways of the BaAka forest people of the Central African Republic. I was inspired to begin foraging and studying the wonders of fungi over the past two years by my sister, Claudette Beit-Aharon (Boston Mycological Club). Sparked by some thoughts from Merlin Sheldrake, I am eager to explore the parallels between how forest people sing, how hyphae grow and intertwine, and how the social networks around these practices also intertwine (maybe we can call lit ethnomycomusicology?).

Favorite Part of the foray: My favorite moment during NAMA (and there were many!) was preparing and singing "Arleen" with fabulous folks of NAMA. Thank you!

Morgan Haas

NAMA-Affiliated Club Scholarship

Affiliation: Mushroom Club of Georgia

Bio: I am working part-time at Gowin Valley Farms in Rocky Face, GA. There, I take part in gathering information for their Kennesaw State/Cornell University grant research, along with aiding in general fungal lab work and the instruction of University of Tennessee at Chattanooga interns. I have taken part in shiitake log-inoculation studies and other endeavors with them over the last few years to build on my own personal research. Most recently, I'm in contact with Kennesaw State's microbiology master's program to explore whether I will return for a master's degree, studying the diverse applications of fungi.

Favorite part of the foray: My favorite part would have to be the unique environment; I've never seen a more welcoming mix of curiosity, thoughtfulness and humility. There was not a single person I encountered who I would not have been delighted to spend an hour or more in deep conversation with. While the foray trips and lectures were the main target of my interest, I believe I have learned the most from the off-hand encounters with the diverse folks of this awesome community.

Jules Amanita

NAMA Culinary Arts Committee Scholarship

Bio: Like many NAMA members, Jules is a self-taught mycologist, fungi photographer, and general mushroom enthusiast. She lives in Virginia. Her grapefruit curd tart with brown-butter-candy-cap-Ritz-cracker crust won NAMA's Culinary *Chopped*-style contest. Use #NAMAChopped2023 to see all of the submissions in Instagram and Facebook. We asked for her "Favorite Part of the Foray" but she was too busy posting highlights to our Instagram account to choose! Check out her photos and posts @jules.amanita and @northamericanmyco for her posts from the foray!

Sarah Shaver

NAMA-Affiliated Club Scholarship

Affiliation: Nebraska Mycological Society

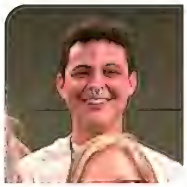
Bio: I am a relative newcomer to the world of fungi. I was introduced to mushroom hunting and identification by my husband's aunt and uncle in Colorado. They inspired us to find a mycological society nearby and start learning. After receiving a scholarship to NAMA, my husband Adam decided to attend as well and it was such a rewarding experience for us both!

Favorite part of the foray: We just loved tapping into the knowledge and passion of the NAMA attendees. Everyone we met was willing to help us identify, share helpful hints and answer questions. We were surprised by the diversity of interests that brought people to Appalachian NAMA 2023; it seems there are hundreds of roads into mycology and everyone has a different story to share. We want to thank NAMA for making us feel so welcome.

Ari Puentes

NAMA-Affiliated Club Scholarship

Affiliation: Asheville Mushroom Club



Bio: I am an undergraduate student in my last semester at UNC Asheville, studying biology and researching mushrooms. I recently completed my senior thesis for which I studied how prescribed fires affect mycorrhizal macrofungal communities in one of my local forests. I started the UNC Asheville Fungarium and have really enjoyed the curation process. I am currently applying to PhD programs to continue studying fungal ecology and evolution.

Favorite part of the foray: This was my first NAMA foray experience and I was absolutely blown away by the community and how kind everybody was. I loved getting to interact with and learn from so many people with a shared passion for fungi. It brought me so much joy to see people appreciate the incredible diversity in this area and to be able to play a part in that by leading a foray. I left the foray with immense gratitude for the NAMA community and the area in which I have been so lucky to live.

Megan Deaton

NAMA-Affiliated Club Scholarship

Affiliation: South Carolina Upstate Mycological Society

Bio: I work for Mushroom Mountain running wholesale, teaching cultivation classes, and a bunch of other fun projects. I currently live in Colorado and have my own business called Megan's Mushrooms. I have been cultivating mushrooms for almost 8 years now.

Favorite part of the foray: The whole foray was so much fun that it's hard to pick just one favorite. I learned a lot about koji, which I knew almost nothing about before. While a lot of it blew my mind, I feel it's achievable to try some myself as it is somewhat similar to cultivating mushrooms. I took Eleana Hsu's class, but also was fortunate to meet and have some fun conversations with Wade Fox and was able to learn even more from him. I had a blast helping Olga Katic with her Culinary Arts tastings and, as always, her food was amazing! I think one of my most favorite parts was the UV night hike. I learned a lot from Alan Rockefeller and Pat Mitchell and am excited to have the light to perfect my skills with UV photos of mushrooms!

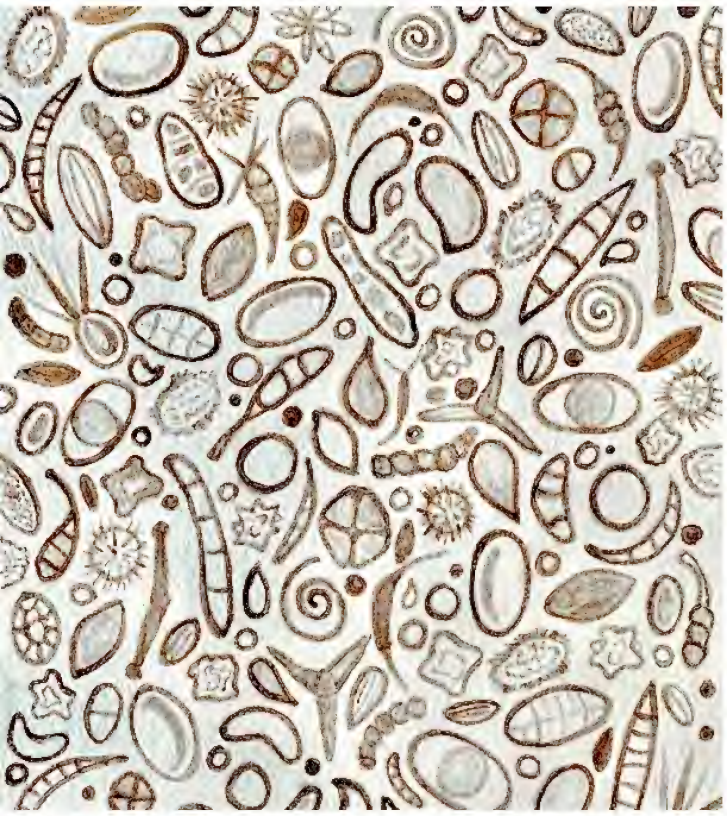
Announcing Awards in 2023 NAMA Visual Arts Contest

ROSE TURSI, NAMA VISUAL ARTS COMMITTEE CHAIR

The NAMA Visual Arts Contest expanded greatly in 2023 to encompass more media and offer expanded categories within Photography. Congratulations to all who offered their inspired creations! It was a competitive contest, the point of which of course is to celebrate inspiration, brilliance, beauty and skill. The following entries were recognized for excellence in their respective categories.

Traditional Drawing:
Ted Pesch
North American Mycological Association

"*Galerina marginata*, commonly known as the Deadly Galerina, is a mushroom that fascinates me. I first came across it while doing fungi curation work at my school, the University of Wisconsin-Stevens Point. After doing a bit of research, I found that this mushroom is poisonous, and can be confused with many edible species, such as *Armillaria mellea* and *Kuehneromyces mutabilis*. Making a health-endangering mistake is often a concern highlighted by mushroomers. This risk is one I find symbolic in my personal life, when navigating relationships and everyday encounters. Though something may seem safe and trustworthy, it is wise to take time and research such scenario before indulging."



Traditional Painting: Taylor Bright

Sonoma County Mycological Association
Mycological Society of San Francisco

Sporelust

"Fungal spores, painted with fungal spores! This is a piece I made in homage to the profound diversity and beauty of fungal spores. The more I peer through the microscope at specimens and dive into their multitudinous dimensionality, the more I am blown away by the dazzling array of spore shapes, colors, sizes, configurations and ornamentations. They have me incessantly pondering about how spore features change over time due to ecological pressures and emergent symbioses, and what such changes might confer when it comes to the reproductive success of a particular fungus. All of these spores were painted with *Coprinus comatus* spore 'ink.'"

Mixed Media: Sundari Masters

San Diego Mycological Society

Journey to the Center of the Fungi Forest

"I have been creating mixed media collages for many years; however, over the past year I have felt drawn to developing collages inspired by the natural world and, in particular, fungi. In my collage, I have included fungi specimens that I have found on forays and photographs that I have taken of fungi (including pink oyster mushrooms that I have grown). In this collage, I have attempted to capture the reverence and awe that I have for the magical world of fungi."

Sculpture: Kayleigh Touchstone
Mushroom Club of Georgia

Fantastic Fungi Species

"The mushrooms included in this piece are as follows: old man of the woods, red chanterelle, American caesar *Amanita*, parrot wax cap, coral-pink *Byssomerulius*, lattice stinkhorn, scarlet cups, turkeytail, Frost's bolete, golden fairy clubs, bleeding-tooth fungus, amethyst deceiver, violet coral, cauliflower mushroom and the bioluminescent green Pepe *Mycena*. The mushrooms are each sculpted out of clay and then hand painted. The base is crafted from foam and craft moss. The rest of the forest scenery is made from pieces of both real and faux foliage, with many of the natural elements being items I collected on my many hikes at the cabin. Thanks for the opportunity to submit my work, and mush-love to all!"

Sewing and Fiber Arts: Molly Stern
New York Mycological Society

"I made this quilt top for my four-year-old nephew who loves fungi. It is hand pieced, with needle-turn appliqué and embroidery. It includes some of his favorite fungi and some of mine: *Clitocybe nuda, Amanita calyptroderma, Xerocomellus atropurpureus, Amanita muscaria, Coprinopsis lagopus, Laetiporus conifericola, Cantharellus formosus, Mycena californiensis* and *Butyriboletus querciregius* as well as cones, acorns, and berries from associated trees (fir, oak, madrone, and redwood)."

Digital Art and Miscellaneous: Melissa Tennille

South Sound Mushroom Club

"I am on the merchandise committee of my local club because I really do love the form of mushrooms and the variety of art and styles in which they are represented. For these digital art pieces, I was inspired by early Italian Capodiamante porcelain figurines. As a person who enjoys collecting antiques and mushroom figurines, I tried to imagine what I would want an antique mushroom figurine to look like. I used the program DALL-E to help me create the images. As for realism, I would say that during the heyday of Capodiamonte, mycology and mushroom categorization was in its infancy. I believe that the folks who would have crafted these pieces back in the day would have been inspired by the forms in nature, not in creating an accurate scientific record. In my mind, the artists would have been more closely tied to the planet Earth and saw themselves as part of nature rather than separate from it."

Pictorial Photography: Mandy Hackney

Humboldt Bay Mycological Society

Lamproderma species

"This is my favorite slime mold, it can only be found around snowmelt. The iridescent peridium gleams like a mood ring and is a telltale characteristic of this beautiful genus. It is always a treat to find!"

Abstract Photography: Mike Hopping
Asheville Mushroom Club

Russula earlei

"Elegant lines don't jump to mind as characteristic of the beeswax *Russula* nor, for that matter, do fleshy tones. Pale straw is more typical, but see the MushroomExpert species page for a similar example. This particular maverick also had to fight its way out from under a rock. Rinsed clean of grit, a history of that struggle is written in swirling gills."

Symbiosis Photography: Jeremy Even-Flint
Central Texas Mycological Society

"This is an image of *Neolentinus lepideus* being eaten by a spotted *Diaperis maculata*. These insects make their home in some fungi and consume them for food. Being in and around the gills of the mushrooms, they are helping to spread the spores."

Documentary Photography: Chance Noffsinger
North American Mycological Association

Instagram @chance_est

"This photo was taken the first time I encountered this beautiful species of *Entoloma*. I was immediately taken aback by the vibrant green and yellow colors that accompanied this little troop of mushrooms. I immediately set down my backpack and got comfortable, because I wanted this photo to pop! Usually when I collect an *Entoloma* I must mentally prepare myself for the arduous identification process that includes counting and averaging the number of sides from multiple spores and careful mounting and observation of obscure characters in the lamellae and pileipellis—but not this species! The gorgeous green and yellow colors along with the unusual odor of mouse pee confidently identify this as *Entoloma incanum*."

NAMA Affiliated Club Spotlight

New NAMA-affiliated Club Profile: Philadelphia Mycology Club

SANDY PATTON, NAMA CLUB RELATIONS COMMITTEE

The newly formed NAMA Club relations committee would like to extend a warm welcome to our newest club, the Philadelphia Mycology Club (PMC). PMC was founded in 2018 by Beth Teigen and has since grown to include a diverse group of novice and experienced mycophiles. Seeing so many young faces in this group picture makes me very happy and hopeful about the future of fungi, forest ecology, and sustainable solutions.

PMC's Mission is as follows: to study, collect, and document fungi; to foster accessibility, diversity, and inclusivity through educating the community on fungi; and to steward the land and advocate for fungal conservation.

Perhaps due to all of those young faces, PMC is not quite like your typical mycological society in that it does not have memberships, dues, or set monthly

meetings. Anyone can learn about PMC's events by signing up to receive their emails at their website. They do have activities year-round, including mushroom walks and forays, tree-identification walks, virtual and in-person classes about mushroom ecology and identification, microscopy workshops, a monthly clean-up event and social events. Of course, anyone is welcome to donate to their club when they register for an event or just to support their educational and environmental efforts.

Another unique aspect of PMC is their work with other environmental groups in and around Philadelphia to provide free and accessible mushroom guidance in an urban setting and to promote environmental justice. For example, PMC is one of 9 teams that make up the Cobbs Creek Ambassadors, who do monthly cleanups at the 851-acre Cobbs Creek Park. They also teamed with *Save the Meadows* for one of their quarterly tree-identification walks. They helped to identify and map heritage trees that were threatened by the development of FDR Park Meadows. PMC members learned the critical skill of tree identification while also helping to save trees that are critical to fungi conservation. Other environmental partners include the Cobbs Creek Environmental Center, the Schuykill Center for Environmental Education, and the Pennypack Environmental Center.

Yes, no matter how informal, PMC does need some financial resources to operate. So, in addition to donations from those that attend their events; they also ask for a donation when they facilitate an event for someone else. Like most mycology clubs, they often receive requests to give a talk or lead a mushroom walk. Their more experienced volunteers are always happy

to lend their time in exchange for a donation to the club. Most requests are from more prominent public education centers but they have also done mushroom walks for birthday parties and even a bachelorette party!

I have saved the best atypical aspect of this club for last: how they got started. Beth Teigen started the club when she was a total novice about mushrooms! She has a dog-walking business and often noticed mushrooms while on walks. She took pictures and wanted to know what they were. To her surprise, she could not find any websites about mushroom clubs or mycology resources in the Philadelphia area. So, she headed to her preferred social media platform, Facebook, for someone who could teach her more. She did find FB groups where she could post her pictures for identification. But still no local groups or events that focused on mushroom walks or learning more about mushrooms. So, she decided to create a Facebook group to see who would join. She named the group "Philadelphia Mycology Club" and sent invitations to all of her Facebook friends and posted about the group in other Philly groups on FB that were outdoors and nature oriented. They were able to schedule their first mushroom walk about a month later. Five people attended, including Ben Ruben, who volunteered to identify the mushrooms they found and has continued to do so ever since. Within a year Sam Bucciarelli joined the group and volunteered her administrative talents to bring more structure to the group and head them down the path of being a more formalized club. Eventually, more volunteers came with mycology experience, newsletter skills, and website know-how. They even had a volunteer design the PMC logo and teach them how to screen print their own t-shirts. They have been going strong ever since and just recently became an official 501c3 nonprofit.

I applaud Beth for reaching out to her local community to learn more about mushrooms. As evidenced in this NPR-produced video, she is certainly no longer a novice. The PMC has been able to accomplish a lot in just 5 years. And,

I must say I am a tad bit jealous of the cadre of young, talented, and enthusiastic volunteers they have attracted to their club. I look forward to learning more about their unique operational methods. And, as a representative of the NAMA Club Relations Committee we look forward to facilitating the sharing of ideas between all of the NAMA-affiliated clubs.

If you live in or near Philadelphia and have not yet discovered this dynamic group you can sign up for their mailing list here. You can also follow them on Facebook, Instagram, YouTube, or Eventbrite. Or, make a connection on iNaturalist.

NAMA

Eats

Unlock the Culinary Secrets of Mushrooms and Elevate Your Gastronomic Experience

Chopped-style Cooking Challenge, Culinary Arts Committee Annual Foray Scholarship Contest

JULIE SCHREIBER, CULINARY ARTS COMMITTEE CHAIR. JESS STARWOOD, CONTESTANTS

NAMA's Executive Committee put out a call for each committee to come up with an unique strategy to award a scholarship to attend the Appalachia NAMA 2023. The Culinary Arts Committee had a conversation about possible options and doing a *Chopped*-style cooking challenge seemed like a fun way to select someone to attend the Annual Foray.

At one of our committee meetings, we brainstormed and came up with our list of ingredients. We wanted to make it relatively easy for people to have the ingredients on hand but also to be a challenge to use them together. We based the contest rules on challenges we had seen on the popular *Chopped* tv show.

Submissions were made either directly to the NAMA Culinary Arts Committee via email or by posting on social media to Instagram or Facebook with a hashtag so they could be easily found by the judges. Since we weren't able to taste the actual dishes, this was really a contest about creativity and presentation.

Contest rules required all ingredients to appear in the final dish, along with any other ingredients of the contestants' choosing. The required ingredients were mushrooms (fresh or dried, wild or cultivated); grapefruit; cabbage; Ritz crackers; and bourbon.

You can view all the impressive contest submissions and recipes by searching Facebook or Instagram using hashtag #NAMAChopped2023. Each member of the Culinary Arts Committee selected their favorite three submissions overall and then those votes were tallied to select the finalists, as follows:

THIRD PLACE

Maitake Pierogies

By Jennifer Marie Poe

Judges especially appreciated the ingenious idea of using Ritz crackers to make the dough for this recipe.

"I made maitake, potato, and fontina pierogies in a Ritz cracker dumpling wrap. They were steamed, then fried in porcini butter and topped with grapefruit cabbage sauerkraut, bourbon glazed onions, and grapefruit creme fraiche." – Jennifer Marie Poe

SECOND PLACE

Black Trumpet & Cabbage Ritz Cake with Bourbon Cream Cheese Drizzle

By Kristen Blizzard

The clever inspiration to put cabbage and mushrooms into a cake is something that none of our culinary artist judges had ever considered before.

Cake

2 cups sugar, ¾ cup vegetable oil, 3 eggs, 2 tsp vanilla extract, 2 ½ cups all purpose flour, ½ cup unsweetened cocoa powder, 2 tsp baking powder, 1 tsp baking soda, 1 tsp ground cinnamon, ½ tsp salt, ½ cup crushed Ritz crackers, ½ cup apple sauce, ½ cup, buttermilk, ¼ cup bourbon, 1 oz dried black trumpets (rehydrated, cooked and chopped), 3 cups finely chopped green cabbage, ¾ cup mini chocolate chips

Drizzle

½ cup heavy cream, ¼ cup grapefruit juice, ⅔ cup sugar, 1 tsp vanilla extract, ⅛ tsp salt, 6 oz cold cream cheese (cubed)

Candy

Juice from ¼ grapefruit, cooked whole black trumpets, 1 cup sugar

Directions

Preheat oven to 350°F. Grease bundt pan (I used Pam). Stir sugar, vegetable oil, eggs and vanilla together until well combined. Add the rest of the cake ingredients and stir well. Pour batter into the prepared bundt pan. Bake cake for about 1 hour until the inserted toothpick comes out clean. Let the cake cool and then turn out onto a rack to cool completely. Whip heavy cream, sugar, grapefruit juice, vanilla and salt with a mixer on medium speed until sugar is dissolved. Add cream cheese 1 cube at a time until incorporated—it will look lumpy at first. Scrape down the

sides of the bowl and whip on high speed until the drizzle is smooth and light. Meanwhile, add sugar and grapefruit juice into a saucepan on the stove, stir and heat on high heat until mixture reaches a crack candy temperature. Quickly add cooked whole black trumpets, stir and pour onto a parchment covered sheet pan. Let cool and then break into pieces. Drizzle frosting over cake and top with black trumpet candies. Enjoy!

FIRST PLACE AND CULINARY ARTS COMMITTEE ANNUAL FORAY SCHOLARSHIP RECIPIENT

Candycap Mushroom Tart

By Jules Amanita

Judges were very impressed with the use of ingredients, including the Ritz cracker crust, the grapefruit curd and the candycap mushroom and bourbon glaze. Using cabbage in the grapefruit curd in order to obtain the purple color was a stroke of brilliance; in addition, they accompanied their entry with an entertaining video of a group tasting, enabling judges to feel like they had been in the room.

Ritz Cracker Crust

Ingredients: About 2 tbsp of powdered dried candycap mushrooms (I used the east-coast species, *Lactarius camphoratus*), 3 sleeves of Ritz crackers, ½ cup maple syrup, ½ cup browned butter.

Directions: Pulverize and pulse together the candycap mushroom powder and Ritz crackers in a blender or food processor. Pour into a bowl, then mix in the brown butter and maple syrup. Press into a 12" tart shell or two 8" pie plates. Allow the crust to set in the fridge while you prepare the grapefruit curd.

Pink Grapefruit Curd

Ingredients: ½ head of red cabbage sliced into thin strips, enough water to cover, 1 cup grapefruit juice, 1 stick (½ cup) of cold butter, cubed, 1 cup sugar, 6 egg yolks

Directions: Boil the red cabbage until the water turns deep purple (or blue, depending on the pH of your water), then strain and squeeze out the cabbage. Boil down the cabbage water until it's noticeably thicker and appears nearly opaque. Over a double boiler on medium heat, whisk together the egg yolks and sugar until incorporated. Then add the grapefruit juice while constantly stirring, followed by the cabbage food coloring. Continue to stir constantly, making sure to scrape the bottom of the bowl to avoid clumps. Once the mixture has thickened enough that you can draw a line in it on the back of a wooden spoon (this may take between 15 minutes and a half an hour), pull from the heat and immediately stir in cubed cold butter. As soon as the butter is incorporated, pour the curd into the tart shell and place in the fridge for at least 3 hours to set.

Candied Mushroom Topping and Bourbon Maple Glaze

Ingredients: ½ cup maple syrup, 3 oz bourbon, a few tbsp candycap mushrooms, dried whole, the peel of 1 grapefruit (pith removed and thinly sliced), sugar for dusting

Directions: Bring maple syrup and bourbon to a boil. Add the candycap mushrooms and allow them to rehydrate full; they should be soft and flexible. Then add grapefruit peel. Allow the liquid to reduce by half then strain into a separate bowl. Dust the mushrooms and grapefruit peel in sugar, and return the syrup and bourbon mixture to the stove and allow it to reduce by half again. Allow the mixture to cool to room temperature and thicken.

Additional toppings and assembly:

Ingredients: Another grapefruit, peeled with the membrane between slices removed, redbud flowers or another edible flower as garnish (optional)

Directions: Once the tart has fully set, place grapefruit slices along the top. Then, sprinkle on the candied mushroom and grapefruit peel, followed by the optional edible flowers. Lastly, pour over the maple bourbon glaze. Return to the fridge for another hour before serving.

EDUCATING THE FUNGI ENTHUSIASTS OF TOMORROW

What is the Fungi Foundation Fungi Education Program?

DIANA RICHARDS, NAMA EDUCATION COMMITTEE MEMBER AND EDUCATION LEAD FOR THE FUNGI FOUNDATION

Imagine a world where students across the globe have the opportunity to unravel the mysteries of fungi, understanding their potential and appreciating the vital roles they play in our ecosystems.

Envision a future where countless mycologists emerge from the upcoming generations, armed with knowledge about these incredible organisms. The Fungi Foundation is on a mission to turn this vision into reality through our Fungi Education Program!

In collaboration with Reconsider and *Fantastic Fungi*, the Fungi Foundation has taken a monumental step towards addressing the lack of fungi education in schools. Our dedicated team has developed a free mycological curriculum designed to empower educators and inspire young minds to explore the captivating world of fungi. We believe that by fostering a deeper understanding of fungi, we can pave the way for a more ecologically aware and sustainable future.

Our engaging Fungi Education Program comprises an array of free resources aimed at educators, students, and curious minds alike. Here's a glimpse of what we offer:

1. The FF Curriculum: Our curriculum is a carefully crafted collection of five modules and lessons suitable for middle (grades 6-8) and high school students (grades 9-12), with suggestions for elementary students (K-5). Aligned with NGSS and Common Core Standards, these

Fungi Education Program

1. The FF Curriculum
2. Fantastic Fungi Education Film
3. Activities for Kids (K-5 Resources)
4. Fungi Education Workshop Training Videos

Fungi
FOUNDATION
WWW.FFUNGI.ORG

www.fungieducation.org

modules introduce students to the enchanting world of fungi. Each module also includes a short film clip from the renowned Fantastic Fungi Education Film. The curriculum is available in English and Spanish!

2. Fantastic Fungi Education Film: For a captivating introduction to the Kingdom of Fungi, we encourage educators to organize Fantastic Fungi Education Film screening events. This mesmerizing film will spark curiosity and ignite a passion for mycology among students. The film is also available in English and Spanish.

3. Activities for Kids (K-5 Resources): We understand that learning should be fun, especially for our younger learners. That's why we've put the "fun" in fungi education with a plethora of free and engaging activities designed for K-5 children. These activities range from online explorations and experiments to printable resources, such as the full educator guide called "The Fungus Files."

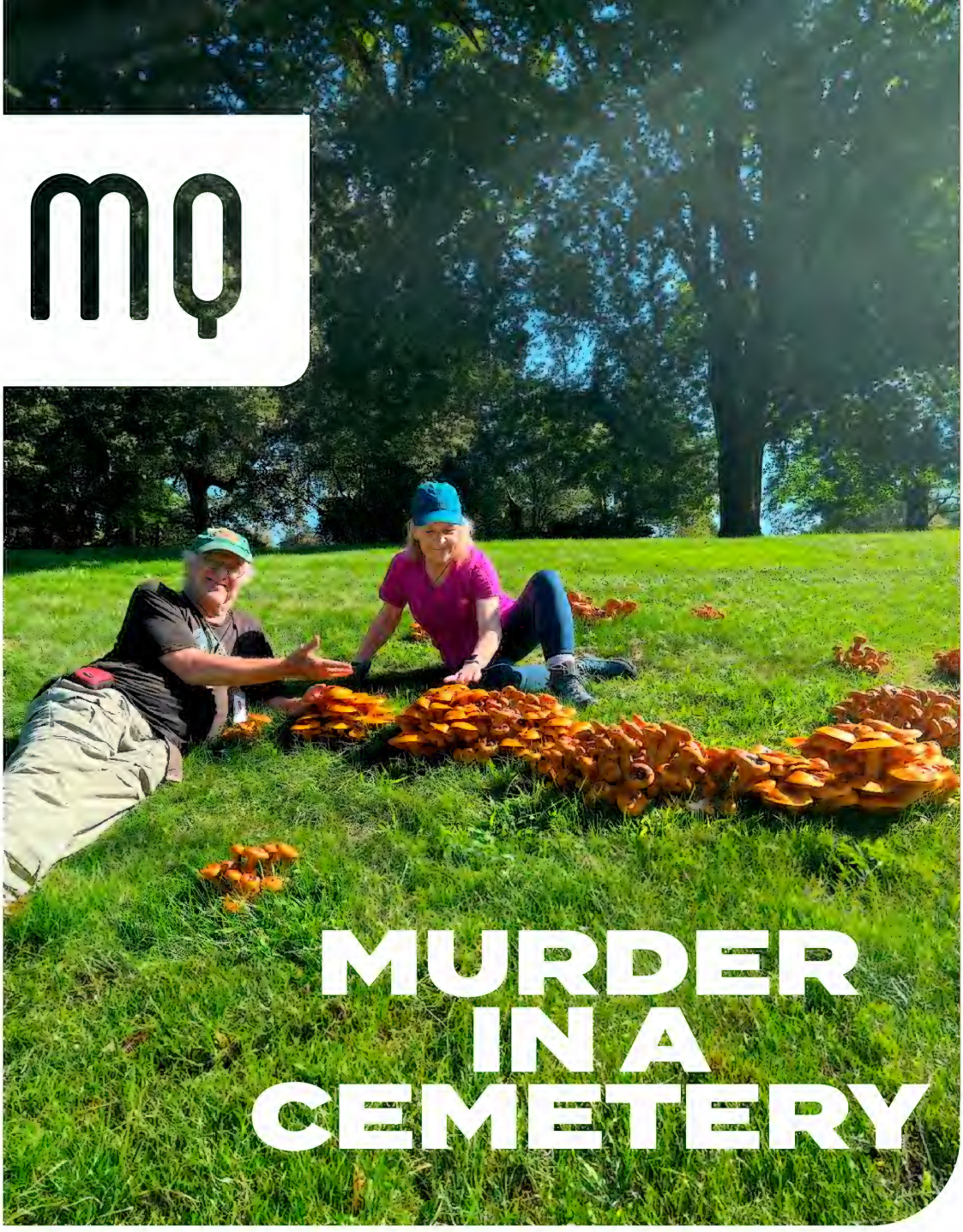
4. Fungi Education Workshop Training Videos: To ensure educators feel confident teaching our curriculum, we've created a series of instructional videos featuring experienced mycologists. These videos provide valuable insights and model effective teaching methods for the FF Curriculum and The Fungus Files.

At the Fungi Foundation, we're passionate about making Fungi Education accessible to all. We believe that by equipping educators and students with knowledge about fungi, we're nurturing a generation of changemakers who will contribute to a more sustainable and harmonious world.

We invite you to embark on this fungal journey with us, by going to fungieducation.org, to explore the mysteries of the fungal kingdom, and we extend our heartfelt thanks to all educators for their invaluable role in shaping the future through education. Together, we can cultivate a deep appreciation for fungi and empower the mycologists of tomorrow.

Our work continues on as we expand our curriculum into more comprehensive lessons for each grade level with the help of world renowned educators and mycologists from all over the world, so stay tuned for more!

Please email NAMA Education Committee member and Fungi Foundation Education Lead Diana Richards at drichards@ffungi.org with any questions.



MURDER IN A CEMETERY

LAWRENCE MILLMAN

Not so long ago, I encountered a woman who was crying in Mount Auburn Cemetery, a celebrated burial ground in Cambridge, Massachusetts. Was she lamenting the loss of a loved one? The answer is yes, after a fashion...

But I'm getting a bit ahead of myself. Let me now say that, in addition to hosting the graves of such eminences as Winslow Homer, Asa Gray, Francis Parkman and Henry Wadsworth Longfellow, Mount Auburn is an iconic place for urban diversity. Naturalists have been studying the trees, plants, birds, amphibians, and even bats in the cemetery's dells, copses, wetlands, gardens and meadows for quite a while. As for myself, I've visited the cemetery quite a few times over the last few years and documented 200+ species of fungi, including the rare Norway spruce cone-dweller *Strobilurus esculentus.*

So there I was, leading a fungal foray for a group of citizen scientists in Mount Auburn. The participants and I found the usual suspects—*Conocybe, Amanita, Russula* and a plenitude of LBM's in the cemetery's mulch. All at once we noticed an unusual-looking orange stripe on a hillside, so we headed up to investigate it. What we saw was a large fruiting of jack o'lanterns (*Omphalotus illudens)*—so large that it must have extended for 20 feet.

"Mesmerizing! exclaimed one of the foray's participants.
"Incredible!" exclaimed another.
"One of the most remarkable fruitings I've ever seen!"
I myself exclaimed.

"Could the mushroom be growing on a coffin?" one of the participants asked me. Unlikely, I said, for jack o'lanterns use deciduous wood as their substrate, while coffins are typically made of coniferous wood. It was probably growing on the buried remains of a recently removed oak or maple.

When I mentioned that jack o'lanterns glow in the dark, another participant said she knew one of the cemetery's night workers and she would ask the fellow to photograph the bioluminescent fungi and send the images to us. I figured this would be quite a sight—a hillside glowing in a blue-green light!

A few days later, when I returned to the cemetery to continue with my inventory, I happened to encounter a woman who'd been on my foray. When she saw me, she burst into tears. "The jacks are gone!" she said. "Ripped out by the maintenance crew!"

We visited the scene of the crime, and nothing was left. Not even a few ravaged stems. I ended up being close to tears myself. Why had all the jack o'lanterns been removed? I dare say that the cemetery's dearly departed hadn't complained about them…

I talked with staff members about this deed. Perhaps in jest, but perhaps not, one of them told me that a raccoon had rolled over the mushrooms, which made them so unsightly that they had to be cleared away. Other members of the staff gave me what's called a default response: if something is regarded as a pest or a nuisance, you have to get rid of it. Several of the staff indicated that whoever removed the mushrooms was "simply following orders," even if those orders meant death and destruction to an organism that occupies a branch on the tree of life surprisingly close to our own.

This essay isn't simply about an incident in a cemetery where, if there was a closer connection between the staff and visiting citizen scientists, the murderous act I've mentioned might not have occurred. It's also about the various yards, gardens and green spaces where fungi tend to fruit. Quite a few people get rid of those fungi because they're prime suspects in the death of their plants – and not just their plants. A fungus on the lawn might poison one's dear little dachshund or one's toddler if either decides to nibble on it. Thus, kick over the villain! Even better, blast it with a fungicide!

I can see no solution to this problem other than education. Teach the public that fungi are not vectors of death and destruction but are ecological warriors without which the world would be even more beleaguered than it already is. Tell them that the world would be less radiant, too, for there would be no more *Omphalotus* species glowing in the dark.

JESS STARWOOD

It all started with a slow start to morel season in the southwest. The forest floor crunching beneath our feet. Vibrant blue skies void of expected thunderheads until the last day of the foray.

"It will be great here next week," everyone agreed. Followed by the somber 12-hour drive home without a single edible mushroom. Next up was my annual trip to Mount Shasta in northern California, where I have memories of sleeping in my car literally surrounded and nearly covered by porcini, butter boletes and morels on my long trek back to Los Angeles. Despite the daily thunderstorms that flooded our camp, there was not a culinary mushroom to be found the entire weekend. We were more successful finding my lost iPhone in the forest than a single spring porcini or morel. On to Alaska for a family trip where a single parking lot porcini was the prize of the week. Even with the dismal spring, my partner and I had high hopes for a summer calendar packed with travels.

Those memorable mushroom years—where you run out of all available baskets, buckets or bags, searching as last resort for any random receptacle you might have stashed under the seat of your car to fill—those years stick with you and become a motivating force to venture out into the woods season after season. It's those memories that get told around the campfire, at club meetings and annual forays. It's when it feels like magic happens where rain, temperature, environment, timing and luck all converge, and you just happen to be there at the center of it, baskets, bags, buckets and pockets ready.

This year's international travels started with a casual side quest for spring mushrooms while in Japan but we were satisfied enough to find some turkeytail

and dryad's saddle without much effort. However, hopes were high when we embarked for Europe and our first destination was the forests of Denmark. Our friend and host, Kyle Cometta of Copenhagen's renowned Funga Farm, warned us that they were in a drought all spring but rain was on the way.

"Next week is going to be incredible," we all agreed as we sought shelter under an oak tree during one of the heaviest downpours I'd ever experienced. I thought longingly of the golden veins of tiny chanterelle pins that had dotted the mossy forest floor earlier in the day, that I knew would end up in another forager's basket in the summer weeks to follow.

Our journey back to the states required a three-hour layover in Warsaw, Poland which, to us, translated as "we have two hours to mushroom hunt in Poland." And, yes, we walked out of the airport to the nearest green space on the map with the fantastical hope of finding an Eastern European bolete to take back home. Among the urban debris, overgrown paths and crumbling buildings, we could only locate a stump ridden with polypores, *Ganoderma subg. Elfvingia*; we considered that a mushroom-hunting success and headed back to our terminal. Moments before our departure, we grabbed a quick lunch of *placki ziemniaczane z gryzbami leśnymi* or "potato pancakes with forest mushrooms." To our surprise, these "forest mushrooms" turned out to be a generous helping of boletes. Porcini at the airport cafe—my partial Polish ancestry smiled that day.

For the next adventure, timing was finally on our side and rekindled our hope that we in fact were proficient mushroom hunters. The timing and conditions were nearly perfect as we meandered the mountainous cloud forests of Oaxaca, Mexico in late July. From *Amanita* to *Armillaria*, *Xylaria* to *Psilocybe zapotecorum*, hedgehogs to *Hygocybe*, trumpets to *Turbinellus*—our spirits were lifted.

Michael and I were excited to return to the states for the Arizona Mushroom Society's Annual Foray in Alpine, Arizona in mid-August. Early reports were again of the same tone we'd grown accustomed to all year: "It's so dry." The monsoons in the southwest were unseasonably late this year. There hadn't been any rain all summer. The last few years in Arizona had been spectacular and we were excited to share this event together for the first time. We both led forays that ended up more plant walk than mushroom hunt, but attendees were still

happy to spend the day in the forest with us; many of them still reported that it was one of the best events yet. Not to mention, Michael's beautifully planned forest marriage proposal to me, but that's a (love) story for another time.

With empty baskets yet again and a somber outlook for the journey east towards the San Juan Mountains for my eighth year at the Telluride Mushroom Festival, we set up camp for yet another dismally dry week in the Rocky Mountains. Finding a log of semi-dried wood ear became the fungal highlight of the trip, but ghost stories around the campfire and gazing at the milky way in a moonless sky became special moments with my teens who tagged along to attend the festival for their first time. Venturing into town for the parade provided a reminder that the event is not just about collecting mushrooms. That's not the reason why so many of us mycophiles travel from all over the country to be there year after year. It's about mingling with others who share the same joy of a walk in the woods. Just like the cycles of the mushrooms themselves, some years are meant for slowing down, looking inward, and reconnecting with what really matters: ourselves and our community. We cannot be productive all the time. We require phases of rest and regeneration.

We may share a love for mushrooms, the thrill of the hunt, victorious meals, or the bragging rights to the haul of the year. But this year, like many others, has proved that it much more matters than a full basket at the end of the day. It's about those longtime friends you meet up with at the annual foray only once a year. It's about your partner that you share the journey with. It's about your fungi-curious friends and family who finally venture out into the woods with you for the first time, trusting your expertise and building tighter bonds of friendship. It's also the children who witness the camaraderie of folks of all walks of life coming together and sharing it all… except maybe the best secret spots. Our baskets may be empty, but our hearts are full.

A Bolete Correction

Lanmaoa fallax that I thought was *B. bicolor*

DAVE LAYTON,
NAMA FIRST
VICE PRESIDENT

My Fall 2022 *Mycophile* piece, "An Old Pothunter's Thoughts on DNA Technology," contained the following incorrect statement, "She also sequenced a bicolor she'd collected. My bicolor sample and that one matched Baorangia bicolor."

I was referring to Sarah Delong-Duhon, president of my local club, Prairie States Mushroom Club (PSMC).

In fact, I was wrong about what Sarah had said. My sample was not *Baorangia*. Even worse, I wrote that article without actually looking at the DNA sequence for the observation; it came back with the name *Lanmaoa fallax*, which apparently has often been confused with *Baorangia bicolor*. I imagine that's because, whatever else this mushroom is, it's still a delicious edible. So the rest of my original piece holds true. If a "bicolor bolete" lookalike has short tubes, cut stem doesn't stain blue, a good raw taste (no bitter or weird aftertaste) and retains a yellow-gold color when dried or cooked, it's good to eat—at least for me and everyone I've fed it to so far. Still, my prep for that article could have been more careful and I apologize to readers.

Enough self-flagellation. Now for some fun, but first I must say that I'm condensing the first parts of this story from two articles published in PSMC's newsletter *Symbiosis*. You might enjoy reading them to learn more completely how I ended up going down this bolete rabbithole, because things are getting curiouser and curiouser.

I was blissfully ignorant of my error until this past February when Colin Domnauer, a PhD student at University of Utah, messaged me asking about a comparison pic I had put in with an iNaturalist observation. I called the observation *Boletus sensibilis* but DNA-barcoding showed it to be *Lanmaoa pseudosensibilis*. The photo was comparing the observed mushroom with my *"bicolor"* observation that was barcoded to *L. fallax*.

My apology to him for the confusion sparked a conversation with Domnauer, whose PhD thesis project is to document *Lanmaoa* species in North America and compare them genetically with specimens of that genus found throughout the world. Apparently, my observation was the only one he had received that genetically fit the holotype for *L. pseudosensibilis*, making it valuable to his research—wow, cool! Then he told me the ultimate purpose of his study is to compare our North American *Lanmaoa* species with a Chinese species, *L. asiatica*, a prized edible when cooked but supposedly significantly psychoactive when consumed raw—WHAT!!?

Now I must humble myself again. In the spring 2023 issue of the *Mycophile*, I reported with chortling hubris on my friend Bill eating blue-staining boletes because he thought they might be hallucinogenic. I want to slap myself upside the head thinking he might have succeeded—that is, if Domnauer actually proves such a possibility.

Here is the photo that Colin Domnauer asked me about; left, *L. pseudosensibilis*; right, *L. fallax*

Domnauer hopes to further his research by engaging community scientists to send him large blue-staining boletes for DNA sequencing. His project's poster was published in *Symbiosis*. He has already received hundreds of samples and says there are already far more different *Lanmaoa* species documented in North America than originally thought. So far this summer I've sent him seven samples of at least four different species. Three of those samples pass my cook-and-dry-yellow test. I've enjoyed them with several meals. Right now I'm not going to eat any of them raw no matter how much of a guinea pig I might like to be. However, if any of the samples are seriously close to that Chinese *Lanmaoa* he told me about, I might have to revisit my guinea-pig policy. I'm not holding my breath though. Anyway, the actual purportedly psychoactive compounds in *L. asiatica* are unknown and evidence of their effects is merely anecdotal. One source claims that "a friend" experienced symptoms for three days. Yikes! I better pack my bags if I'm going to be a guinea pig!

Call for Collections of North American "Bicolor" Boletes
(Lanmaoa spp., Baorangia spp. and their look-alikes)
Anecdotes abound of closely-related blue-staining boletes from China possessing hallucinogenic effects
BUT the taxonomy of this group is poorly studied
Help uncover new species and contribute to my PhD research on psychoactive boletes by providing:
1. Field photographs (w/GPS coordinates)
2. Dried samples (w/collection number)
3. iNat/MushroomObserver number (if applicable)
contact me for more details:
colin.domnauer@utah.edu

Colin Domnauer's project invite.

That last information came from a CNN travel article this summer about Janet Yellen eating these mushrooms

while in China. The article includes a photo of *L. asiatica* attributed to Domnauer. Wow he really is the go-to guy for this stuff! In the Washington Post article entitled "Yes Janet Yellen Ate Magic Mushrooms. Here's Why She Didn't Get High," in which Domnauer is quoted extensively. He actually traveled this summer to Yunnan Province, China,, where *L. asiatica* grows. In the article, he explains the potential of *L. asiatica* may hold for medicinal applications if the psychoactive compounds can be identified. He and his student assistants are currently barcoding hundreds of samples of North American *Lanmaoa* and related fungi. At the very least, his research will greatly increase our knowledge of this genus and at the most, the sky's the limit!

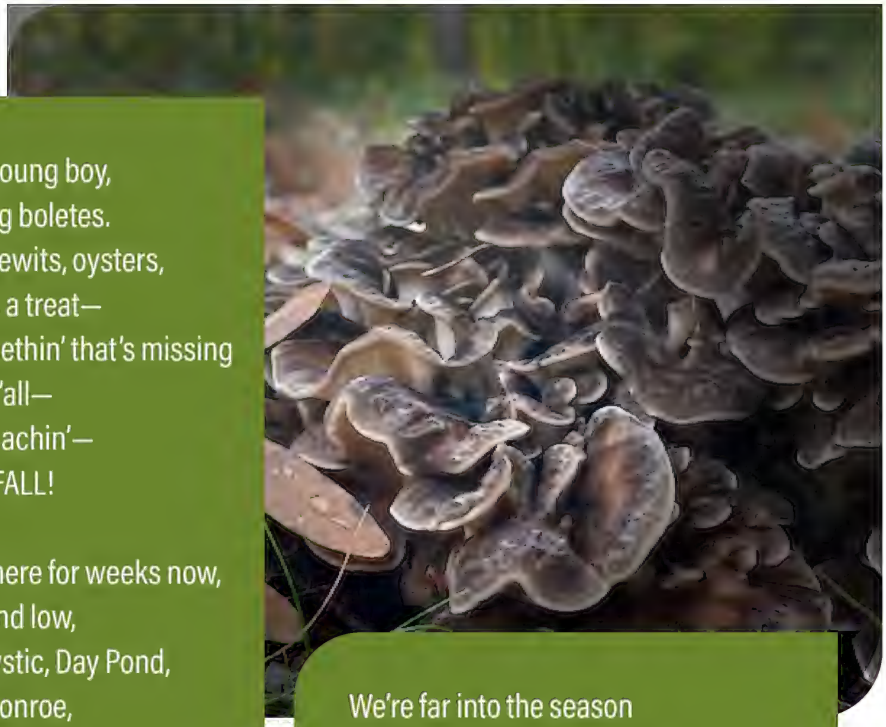
People in Yunnan China purchasing jian shou qing (*L. asiatica*)

I hope Domnauer's project earns him his PhD. He definitely deserves it if he takes it to completion. I wonder if he and my old friend Bill are really kindred spirits grasping at wisps of possibility, hoping to connect to something amazing. Stay tuned! The final chapter of this story will be published either here or in *Symbiosis*.

FALL FORAGING IN CONNECTICUT

JOE BRANDT,
NAMA NORTHEAST
REGIONAL TRUSTEE

To the tune of
“Pinball Wizard”
from “Tommy”



Ever since I was a young boy,
I've picked those big boletes.
Picked chickens, blewits, oysters,
every one of them's a treat—
but there's still somethin' that's missing
and I've got to tell y'all—
my poor ol' heart is achin'—
I NEED A HEN THIS FALL!

I looked here and there for weeks now,
I've scoured high and low,
checked Cobalt, Mystic, Day Pond,
even Granby and Monroe,
but I just don't seem to get it
so I really got to know—
now can anybody tell me:
WHERE DO THE DAMN THINGS GROW??

I'm a mushroom hunter
there has to be a catch—
a mushroom hunter and
I NEED A HEN TO SNATCH!!

Why is it I can't find them?
I don't know—
Maybe they're just not there!

We're far into the season
with the pickins' gettin' slim;
from the Massachusetts border
to New Haven and Berlin,
I tried Enfield, Warren, Wakefield,
even Sharon and Cornwall;
I'm about to have a meltdown—
I NEED A HEN THIS FALL!!

I thought I was
the greatest thing around,
but all those hens
MUST STILL BE IN THE GROUND!

Can't cook me no *Grifola*,
can't find one anywhere—
looked up and down an' sideways,
but the mushrooms just don't care!
And I'm gettin' pretty tired,
so I got to tell y'all,
I think I'm gonna lose it—
I NEED A HEN THIS FALL!!

NAMA

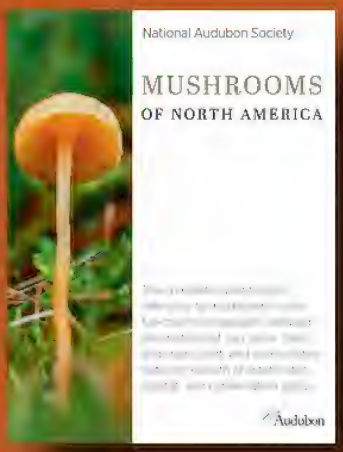
Reads

Explore Captivating Literature Dedicated to Mushrooms and Mycology.

Book Review:

National Audubon Society Mushrooms of North America

DEBBIE VIESS, COFOUNDER, BAY AREA MYCOLOGICAL SOCIETY



No authors cited on cover.
Alfred A. Knopf, Publisher. 2023.
Flexibound Paperback, 711 pages
ISBN: 9780 5993 19987
$27.37 on Amazon.

Any review of the new *National Audubon Society Mushrooms of North America* needs to acknowledge the elephant in the room: Gary Lincoff and his pioneering 1981 book by the same publishers. Many here in NAMA have an enduring affection for Lincoff and his "little book." It has served us well for many years and some might find this new version a bit of an upstart; however, we cannot judge these two books by the same measure. They were produced in different times and

with a different focus. The original book by Lincoff has a bit of an eastern-North-American bias, limited photographic references—but good species descriptions (including spore data) and plenty of information on both edibility and toxicology. It is also highly portable, in the spirit of a true field guide.

This new Audubon book doesn't really try to be a field guide in the same sense. A large and heavy tome, it contains 660 species and 2,900 photos taken by at least 965 photographers. It refers to itself as "the complete identification reference to mushrooms" and for the first time includes reasons why we should care about mushrooms, various avenues of research on and with fungi, the daunting task of describing mushrooms, and how little we really know about North American species, and even touches upon some of the potential new tech uses of fungi for bioremediation, building materials and fungal medicine. Well-known professional mycologists Roo Vandergrift and Else Vellinga write the introductory paragraphs. Unlike with Audubon's flagship organisms the birds, fungi are not well beloved or well known by the majority of American readers and it seems like these introductory paragraphs attempt to give people a reason to care; I am not sure how this information actually helps in a so-called identification reference.

Conservation status is emphasized in the pages preceding mushroom descriptions, and is also a focus in the three other books (birds, trees and flowers) within this updated Audubon nature series. Certainly birds are well studied and they show up regularly for their counts. This meticulous data has been published and can be referenced and compared over many decades; trends can be seen, whereas actual conservation status of most of these fungi is unknown and likely to remain so due to the unreliability of collections over time. Fungi do not always show up for our surveys.

Most fungi have not been analyzed as to occurrence and threats; it is the habitats where they live that are threatened. The sporadic use of Nature-Serve Explorer "G" ratings within this volume are often inaccurate; how can one claim that the pretty, blue-toothed fungus *Neoalbatrellus subcaeruleoporus*, which is small and subtle and rarely seen or collected, is any more common or uncommon than it has ever been? And yet in this book it receives a "Near Threatened" status. Perhaps it has always occurred in low numbers? The peppery little orange chanterelle

found in Florida, *Cantharellus coccolabae*, has an "Endangered" status with the IUCN, since it is a sand-dwelling species along coastal Caribbean shorelines (boo, global warming, sea rise and tourist hotels!), and yet its host tree, which lives in the exact same areas, gets a "Least Concern" with the IUCN! Which one is it? Endangered or fine? *Amanita novinupta*, a common species in California, somehow receives an official G-3 status ("Vulnerable") despite claims within that very species description that it is of least concern! *Catathelesma ventricosum*, the North American species, is commonly found and yet the Eurasian equivalent, *C. imperiale*, has its G3 ("Near Threatened") status shown in a book on North American fungi. Why? It seems as though the authors are grasping at ways to use some of the "official" conservation statuses, regardless of whether these fungi are from North America or even truly threatened! Who vetted these statuses prior to publication?

As with most places on Earth these days, save the habitat and you will save the fungi (and everything else). Detecting fungal DNA in high-throughput sequencing doesn't tell you anything about abundance or health of the mycelia, just that bits of that fungal DNA are in the environment/spore bank. Fungal surveys cannot tell you how abundant the fungi are underneath the ground when those fungi may not fruit for years or even decades, and then only briefly when ground conditions are exactly right. Even more people posting photographs of fungi to places like Mushroom Observer (MO) and iNaturalist (iNat) doesn't really tell us anything about population trends, just that more people are out there taking photographs.

There is one more issue with the conservation category as used in species descriptions within this book: use of the term "not uncommon" would be better served without the double negative. Perhaps merely "common" would do, or "somewhat common?"

Discussion of the medicinal use of micro-fungi (producers of penicillin and cyclosporine) is probably not a useful feature of this guide to identification of macrofungi, but more part of an attempt to convince the public that fungi are an important part of our world. We at NAMA need little convincing. Nor is a discussion of the use of neurotoxic macrofungi for shamanic healing or PTSD treatment for military veterans germane to mushroom ID. The efficacy of so-

called "medicinal fungi" is also in dispute within our mycological community, but you wouldn't know that to read this book's intro. Nascent technologies of mycoremediation and mycofiltration have not been shown to be effective or affordable in large-scale applications and yet they are mentioned without critique in this book's preface to the identification of fungi.

Jacob Kalichman, a well-respected mycologist in the North American amateur community, write up the species descriptions and provides a guide to the various orders discussed within this book (pgs. 690-697). He also breaks with tradition and organizes the book into these orders, rather than by mushroom shape, size and hymenium as was done in the past. It certainly needs to be done, but it does not make it easier to use this book, especially by those who are not already well versed in fungal identification. It is however quite useful to flip through the various color-coded sections of fungal orders and see just who is related to whom. The answers might surprise you!

There are no identification keys that would serve novices in their ID attempts and the section called "How to Use this Book" is unfortunately left out of this first printing. At the very least, Audubon should make those pages available free somewhere online.

The use of icons to represent each of these orders is also a bit confusing. Several of them appear as only slightly differing "blobs." Pezizales, with its myriad cups, is represented by a vague morel-ish shape. The Rhystismatales, which contain mostly tiny cups and discs and spots on plants, is represented by capped and veiled mushrooms in a cluster! Phallales, the stinkhorns, have a simple capped mushroom with a straight stipe despite so many of their shapes being highly distinctive. The Hypocreales, including many parasitic fungi, are represented with what looks to be a fat bolete! The actual Boletales are represented by a slender, somewhat boletoid fungus but with a prominent low partial veil! I don't get it.

Audubon chose to leave out most information on fungal toxicity (with only a very brief paragraph by Roo Vandergrift) or edibility, and in fact takes pains to discourage people from foraging fungi. And yet, as we well know, the desire to eat these fungi as well as interest in their toxicity is what draws most of us to this field, at least at first. It is an odd choice.

In the introductory identification pages, a sentence states "Gills, also called teeth or pores …" would have benefited from use of the terms hymenium or fertile surface; gills are not teeth or pores, but they are all hymenial structures. Yes, those structures can be morphed into each other with evolution and gene expression but I wouldn't call them all gills. The words hymenium/fertile surface are added to the glossary of terms, so why not use them? Speaking of the glossary, a volva is just another term for the universal veil, and not merely the volval remnant at the base of certain Amanitas. All *Amanita* have volvas, but not all have basal volval remnants. This discrepancy could confuse new mushroomers attempting to identify an *Amanita* with no obvious basal volva at all! In fact the glossary is oddly truncated to only two pages. Compare this to the five pages of glossary words given to the new Audubon bird guide despite the fact that fungi and their vocabulary terms are far less well known.

A field guide or identification guide that purports to cover the entire continental United States will never be able to show enough species from one particular region to satisfy a serious hunter/identifier. At best, the author will select the most interesting, common or showy species, an engaging introduction to fungi as it were. In this case, Kalichman does his best to mix things up between the Eastern and Western species, probably in the end pleasing almost no one. I read one reviewer on Amazon comment that Kalichman has a Western bias; I do not find this to be so. Of course, the opposite could be said about Gary's book. This is exactly why regional guides are much more valuable to regional hunters. There are only so many mushrooms that can fit into any one book.

Lincoff complained that he was compelled by his publishers to make up common names for his guide, but also stated that it was easy enough to learn the Latin names and that Latin was the preferred form amongst serious mycologists, both amateur and professional. Kalichman appears to have embraced the iNat version of "keeping things simple" for the masses and avidly makes up a slew of brand new, not-so-common "common" names, like "Candlelight Vigil" for *Multiclavula mucida* (which perversely I both love and hate). And why call the former *Boletus satanas* in North America (now *Rubroboletus eastwoodiae*) "Satan's Bolete," when it is really Alice Eastwood's bolete?! Although Kalichman approaches the making up of new names with enthusiasm and creativity, I am sure that Audubon also mandated that he do so and he seems to look for common names already in use

where possible, so kudos to him for that. The name changes both in Latin and common usage are both befuddling!

I share another reviewer's concern that former Latin names are not cited along with the new. With the current rate of Latin name changes, it is very useful to know what it used to be called, at least in the recent past. As we know, all fungi have gone through many name changes over the centuries; see Index Fungorum if you don't believe me!

Kalichman writes all of the species descriptions with an insider's knowledge; no small feat but the information given for each mushroom is not consistent, and is sometimes not enough for good identifications. A distinctive odor might only be mentioned in the intro paragraph but sometimes it isn't mentioned at all. It should have been in the description of *Agaricus xanthodermus*. Knowing the taste of fungi also can help in identifications, but often is not given. It would be nice to see standardized descriptions for each mushroom.

Spore print color is emphasized but a white spore print is a worthless ID feature within the genus *Amanita* (and for species distinctions within other white-spored genera; why not also provide some useful spore data on every example given?). Although latex color is provided for most of the *Lactarius species*, it is not given for the Western candy cap (*Lactarius rubidus*), even though a pale skim-milk color, changing to almost clear, is a main feature for telling it apart from the myriad other orange, bright-white-milked California *Lactarius* species!

Perhaps Audubon's insistence upon including multiple and ofttimes redundant photos with every species description interfered with Kalichman's ability to add in all of the relevant and important details for making good identifications?

How about all of those pretty photos, anyway? Audubon trumpets the fact that this book has 2,900 photos (and I count/estimate at least 965 photographers!). And what a bargain they are! The publishers/Audubon make an effort to choose only online photos that had a Creative Commons (CC) commercial license; this means that the photos can be used for free, even in a commercial publication, as long as certain criteria are met. Those criteria include citing the author, citing and linking to where the photo was first seen and citing the license used. In a best-case

scenario, that photographer would also be contacted about the use of her/his/their photo(s) and perhaps offered financial compensation (often, a free book is given in the case of the use of photos for mushroom books; this has certainly been my experience.). What Audubon does in practice here is cite the photographers' names (if known) or otherwise their screen names in the credits. Period. No attempt was apparently made to contact them for a real name if a pseudonym had been used. No source for that photo is provided and there is no way to know who is associated with what photo and where, because page numbers aren't given and photos aren't labeled. It is also possible that a handful of folks who did not have the commercial CC license also have their photos used, as claimed by a few.

It is obvious that no one with specific knowledge of the field of mycology chose and vetted these photos. If you are going to have multiple photos per species entry, at least attempt to show salient features! The entry for *Leratiomyces ceres*, a common species in California, has multiple cap shots, all with the typical orange color. How many examples do you really need? How useful it would have been to show the dramatic changes in gill coloration as they mature. I know those photos exist because I created some of them. Photos appeared to be chosen for artistic rather than taxonomic merit. *Amanita* are not shown in their entirety. Mushrooms with ridiculously long "rooting" stipes like *Oudmansiella* and *Caulorhiza* are not shown with their dramatic stipes illustrated, despite the existence of an excellent photo of author Kalichman with a typical *Caulorhiza* in hand!

Finally, no one who knows fungi vetted the identification of all of those photos. Not all fungi on MO or iNat are accurately labeled. How else to explain the photo of the cap of *Calbovista subsculpta* on the *Amanita magniverrucata* page? *Coltrichia perennis* with a white agaric as its page header? *Heliocybe sulcata* with a photo of *Coltrichia perennis*? *Amanita calyptroderma* with an *Amanita vernicoccora* photo? You can play along at home and find your own photo errors!

Note: Jacob Kalichman had nothing to do with the selection or placement of these photos, nor with the final editing of this book. It's all on Audubon. Here's another irony: the cover jacket photo is a commercial and pretty crappy stock photo by Stephen Morris Photography/Alamy; THAT one they did pay for. Sigh.

So, what did I think about this book overall? It's not useful as a field guide, it's too heavy and its scope both too broad (all of North America north of Mexico) and not detailed enough for regional use. It provides no easy way for novices to identify their finds, no keys, no useful hints to finding the identity of that mushroom in your hand (which might be improved with the addition of the dropped "How to Use this book" page). It is very useful if you want to get a better feel for the modern placement of fungi by flipping through images associated with the various color-coded orders. The descriptions of the fungi covered are generally insightful, and the Latin names up to date, at least from the date of publication! If someone knows nothing about fungi and wants to see a spectrum of things found all over the country while cozied up at home in a favorite armchair, this book will provide an entry point. It is at best an introduction to some of the modern concepts of fungi, and that's not nothing.

I do think that the treatment of the hundreds of photographers is disgraceful. Next time, use fewer, better, more illustrative photos and give real credit, including page references and photo sources to photographers—and let a mycologist select those photos, not an art director.

MYCO Opportunities

Opportunity Announcement:
The Future Is Fungi Award

SUBMITTED BY SUSANNE GLØERSEN, INITIATOR

We want to make you aware of an exciting opportunity for qualified NAMA members: The Future is Fungi Award, initiated to honor frontier and cutting-edge science related to the use of fungi for solving environmental challenges. Ms. Gløersen reached out to us just as this *Mycophile Quarterly* was headed to press, hoping that we could help spread word of the award "like fungi spread spores," to which we responded HOLD OUR BEER (hey, yeasts are fungi!).

The Future of Fungi Award is dedicated to honor, recognize and accelerate pioneering work in harnessing the power of fungi for environmental innovation. The award is focused on both research and innovation in academia and in research-driven start-ups that aim to use fungi to change the world for the better. Its goal is to help bring mycological discoveries to life and make a tangible impact upon the world.

A diverse jury will select the award recipient(s); this body is comprised of representatives from research institutions, corporations, investors and a wider ecosystem that includes the European Innovation Council, as well as an advisory board that includes the Crowther Lab at ETH Zurich.

Awardees will receive 10,000 EUR, mentorship, access to a network and enhanced visibility. Intrigued mycoparties will find more detailed information at www.futureisfungi.org.